

Remarks/Arguments:

Claims 1-29 are pending in the Application. Claims 1-7, 10-25, 28 and 29 are rejected. Claims 8-9, 26 and 27 are objected to. No claims have been amended. No new matter has been added.

Applicants would like to thank the Examiner for the telephone interview conducted on March 18, 2010. During the telephone interview, Applicants' representatives explained to the Examiner that Applicants' system (as recited by claim 1) moves the beacon transmission period to a new beacon transmission period upon detecting a collision. For example, if either nodes A, B or C in the network detect a collision with node D, then all three nodes (A, B and C) move from the current beacon transmission period to a new beacon transmission period. Applicants' representatives then explained to the Examiner that Elliot does not move all of the nodes in the network to a new beacon transmission period. Specifically, in Columns 7 and 8, Elliot describes that if node A detects a collision with node D, then only node A is moved (nodes B and C do not move). In order for nodes B and C to move, they would also have to detect a collision. See explanatory figures (not for filing) enclosed.

In response to the above arguments, the Examiner stated that he now has a better understanding of the invention and would have to look more closely at the Nishikawa and Elliot references (although no official agreement was reached). The Examiner suggested that Applicants reply to the final Official Action (without amendment) at which point we will reevaluate the Nishikawa and Elliot references in response to our arguments.

On page 3, the Official Action rejects claims 1, 10, 11, 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa (US 2004/0264425) in view of Elliot (US 6,963,747). It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

... first radio communication device detects a beacon of another network in a beacon transmission period used in a network to which the device belongs, the first radio communication device transmits a beacon ... which gives notice of a collision of the detected beacon and gives notice that the beacon transmission period is moved to a new beacon transmission period excluding the detected beacon of the other network ...

...a step in which the first radio communication device transmits a beacon after moving in the new beacon transmission period ...

... a step in which...the second radio communication device transmits a beacon in the new beacon transmission period...

... a step in which ... the third radio communication device... transmits a beacon in the new beacon transmission period... ("Emphasis Added")

Claim 1 relates to the detection of a beacon collision. Specifically, a radio communication device detects a beacon from a device in another network which collides in the beacon transmission period. When the collision is detected, the radio communication device along with the other radio communication devices in the network are all moved to a new beacon transmission period. Support for this feature can be at least found in paragraphs 152-171 of Applicants' specification. No new matter has been added.

In paragraphs 109-127, Nishikawa teaches a system where a new device entering the network moves to an empty transmission slot (the beacon transmission period does not move). For example, when a new device D moves into the beacon transmission period of network A, B and C, device D determines an unoccupied time slot and enters the beacon transmission period of network A, B and C (device D moves to an empty slot which does not collide with the other devices). Nishikawa's beacon transmission period, however, does not move (A, B and C do not move).

In similar art, Elliot suggests a system where nodes in a network may move their transmission slots upon detecting collisions. For example, if node A from a network consisting of nodes A, B and C detects a collision with node D, then node A would move its transmission slot. Nodes B and C, however, would not move their transmission slots (because they did not detect a collision). Thus, in Elliot's system, only the node which detects the collision moves its transmission slot (not all of the nodes move to an entirely new beacon transmission slot). In order for nodes B and C to move, they would also have to detect a collision. Support for this feature can be at least found in Column 7, line 30 to Column 8, line 40 of Elliot ("*there can be a collision whenever node A's transmit schedule has a one and same place as does a node in the collision set ... a random choice is made to reshuffle the schedule of the node being investigated or to correct the collision ... once the method has either reshuffled or patched a given node schedule, for a member of its collision set, it can proceed to the next member of the collision set*").

as determined at 216"). Thus, in Elliot's system only the node which detects a collision moves to a new transmission slot.

Applicants' claim 1 is different than the art of record, because when a node within a network detects a collision, the other nodes are notified of the collision so that all of the nodes may move to a new beacon transmission period ("*... first radio communication device detects a beacon of another network in a beacon transmission period used in a network to which the device belongs, the first radio communication device transmits a beacon ... which gives notice of a collision of the detected beacon and gives notice that the beacon transmission period is moved to a new beacon transmission period excluding the detected beacon of the other network ...a step in which the first radio communication device transmits a beacon after moving in the new beacon transmission period... a step in which...the second radio communication device transmits a beacon in the new beacon transmission period..... a step in which ... the third radio communication device... transmits a beacon in the new beacon transmission period...").*

For example, if node A from the network A, B and C detects a collision with another node D, then node A notifies the other devices (B and C) in the network of the collision. Since node D is colliding with node A, then all three of nodes A, B and C move from their current beacon transmission period to a new beacon transmission period which does not collide with device D. This feature is at least supported in paragraphs 171 of Applicants' specification. Thus, in Applicants' system (as recited by claim 1), if any node within a network detects a collision, then all of the nodes in that particular network move to a new beacon transmission period (the other nodes do not have to detect the collision). Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record.

Claim 18 includes similar features to claim 1. Thus, claim 18 is also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

Claims 10, 11 and 19 are also patentable over the art of record due to dependency on allowable claims 1 and 18.

On page 5, the Official Action rejects claims 2 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot and further in view of Tobagi (US 4,503,533). Tobagi, however, does not make up for the deficiencies of Nishikawa. Thus, claims 2 and 12 are also patentable over the art of record due to their dependency on allowable claim 1.

On page 6, the Official Action rejects claims 3, 4, 13 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot in view of Tobagi and further in view of Ben-Michael (US 5,339,313). Ben-Michael, however, does not make up for the deficiencies of Nishikawa and Elliot and Tobagi. Thus, claims 3, 4, 13 and 16 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

On page 7, the Official Action rejects claims 6, 14, 24 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot and further in view of Garcia-Luna-Aceves (US 2002/0080768). Garcia-Luna-Aceves, however, does not make up for the deficiencies of Nishikawa and Elliot. Thus, claims 6, 14, 24 and 28 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

On page 8, the Official Action rejects claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot in further view of Suzuki (US 5,652,752). Suzuki, however, does not make up for the deficiencies of Nishikawa and Elliot. Thus, claim 20 is also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

On page 8, the Official Action rejects claims 7, 15 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot and Garcia-Luna-Aceves and further in view of Suzuki. As previously mentioned, Garcia-Luna-Aceves and Suzuki do not make up for the deficiencies of Nishikawa and Elliot. Thus, claims 7, 15 and 25 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

On page 9, the Official Action rejects claims 5 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot and further in view of

Watanabe (US 6,791,996). Watanabe, however, does not make up for the deficiencies of Nishikawa and Elliot. Thus, claims 5 and 23 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

On page 10, the Official Action rejects claims 17, 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot in view of Suzuki and further in view of Ben-Michael. As previously described, Suzuki and Ben-Michael, however, do not make up for the deficiencies in Nishikawa and Elliot. Thus, claims 17, 21 and 22 are also patentable over the art of record for the reasons set forth above with respect to claim 1.

On page 10, the Official Action rejects claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Elliot and further in view of Fike, Jr. (US 6,061,737). Fike, Jr., however, does not make up for the deficiencies of Nishikawa and Elliot. Thus, claim 29 is also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

In view of the arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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Enclosure: Explanatory Figs. (2)

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